

STUDIES OF THE NORTH AMERICAN WEEVILS BELONGING TO THE SUPERFAMILY PLATYSTOMOIDEA

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The superfamily Platystomoidea Pierce (1916) is composed of those weevils classed by LeConte and Horn and other authors under the family Anthribidae. In planning a more comprehensive classification of the Rhynchophora it has been found best to raise the old conceptions of families to a superfamily rank.

The oldest valid name in the superfamily is *Platystomos* (Hellwig) Schneider (1791), and hence it gives its name to the family in which it is to be placed and also to the superfamily. The group is composed of individuals with clavate, nongeniculate antennae, flexible maxillary palpi, a distinct labrum, globose anterior coxae, and an exposed pygidium.

TABLE OF FAMILIES OF PLATYSTOMOIDEA

1. Prothorax with transverse carina near base; third joint of tarsus usually largely inclosed in the second-----2.
Prothorax without transverse carina near base; third joint of tarsus free from second-----**Bruchelidae** Pierce (1916) (not North American).
2. Antennae inserted on the sides of the rostrum; labial palpi three-jointed (Pleurocera)-----**Platystomidae** Pierce (1916).
Antennae inserted on the upper surface of the rostrum near the eyes; labial palpi at least sometimes four-jointed (Anocera).
Choragidae Des Gozis (1882).

The transverse carina of the prothorax is of definite systematic value, as it represents the suture between two distinct portions of the thorax. This will be evident by examining the series of illustrations herewith presented. The area in front of this carina and laterally inclosed by it when the carina turns forward at the sides is the *scutellum*. From the anterior end of the lateral carina to the pre-coxae is often found the *pleural suture*. Its presence indicates a

primitive character in the weevils, and hence where possible the arrangement of groups has been altered to place those with a distinct pleural suture first.

The subfamilies and families are also arranged to show the backward and downward movement of the posttergite and postscutellum which are represented by the area behind the transverse carina. I shall call this carina the *scutellar carina*, as it often delineates three sides of the scutellum. The posterior declivity behind this carina often has another carina which may sometimes be basal. It separates the posttergite from the postscutellum and may be known as the *postscutellar carina*.

NOMENCLATURE OF GROUP

The group so long known as Anthribidae involves some difficult nomenclatorial problems.

After a thorough search of the literature I have found the following history applying to the nomenclature of the families:

Anthribus GEOFFROY, 1762, Hist. Abr. des Ins., vol. 1, pp. 306-309.

Only one species satisfies the binomial requirement. Species No. 4 is definitely referred to Linnaeus, Fauna Suecica (first edition) No. 370, which is *Dermestes pulicarius*. This work is pre-Linnean (1746), but its second edition appeared in 1761, and furthermore the Systema Naturae, tenth edition (1758), also contains this species. In the twelfth edition (1767), p. 574, Linnaeus refers this species to *Silpha* and quotes *Anthribus* 4 Geoffroy as a synonym. Bradh (1769) cites *Anthribus* as equal to *Silpha*. The obvious conclusion is that *pulicarius* must become type of *Anthribus* and the genus must pass out of the Rhynchophora.

Hence *Anthribus* Geoffroy, 1762, with *pulicarius* Linnaeus as type, takes the place of *Brachypterolus* Grouvelle (1913), the subfamily Anthribinae takes the place of Cateretinae, and family Anthribidae of Nitidulidae.

The name *Anthribus* was subsequently given other meanings.

Anthribus Müller, 1764, Fauna Insectorum Friedrichsdalina, is not binomial.

Anthribus Forster, 1771 (Novae Spec. Insectorum, Centuria I). Forster follows Geoffroy, but adds two new species, *fasciatus* and *nebulosus*, neither of which can be made type of *Anthribus*, as they were not originally included. Equals *Brachytarsus* Schönherr (1833) not (1823).

Anthribus DeGeer, (Mem. Hist. Ins., vol. 5). This genus is monobasic, founded on *ruber* DeGeer, a synonym of *Silpha rustica*. It equals *Triplax* Herbst (1793).

Anthribus Müller, 1776 (Zool. Dan. Prodr., p. 57). Only a single species, *glaber*, is included. It does not belong to the Rhynchophora.

Anthribus Geoffroy, 1785 (Fourcroy's Ent. Paris, pp. 136-139), contains 12 species, of which *pulicarius* is fourth, and the only one available for type in his original genus of 1762.

Macrocephalus Olivier, 1789 (Intr. Hist. Nat. Ins., vol. 4, pt. 3, pp. 36, 158), includes only *Curculio albinus* Linnaeus, which becomes type, but the generic name is preoccupied by *Macrocephalus* Swederus 1787.

Anthribus Fabricius, 1790 (Nov. Ins. Gen., vol. 1). The genus is frequently dated from this description, based on four species, of which Latreille (1810) designated *latirostris* Fabricius as type. Inasmuch as the name *Anthribus* had been correctly used otherwise by Geoffroy (1762), Forster (1771), DeGeer (1775), Müller (1776), it is impossible to accept this interpretation, which is the one which led to the name Anthribidae as commonly used in America and Europe.

Platystomos (Hellwig) Schneider, 1791 (Nov. Ins. Gen., pp. 21-23). Schneider discusses Fabricius's name *Anthribus* (not Geoffroy, 1762) with four species and refers it to *Platystomos* (Hellwig). Following Bedel (1885) we may consider the first species, *albinus* Linnaeus, as type, and the genus takes the place of the preoccupied *Macrocephalus* Olivier (1789) and becomes the type genus for family and superfamily.

Family PLATYSTOMIDAE Pierce (1916)

This family is founded on *Platystomos* (Hellwig) (1791) and is equivalent to the group Pleurocera of Lacordaire.

TABLE OF SUBFAMILIES OF PLATYSTOMIDAE

Scutellar carina of prothorax prebasal.....Platyrhininae, Everts (1903).
 Scutellar carina basal.....Platystominae, new subfamily.

Subfamily PLATYRHININAE Everts (1903)

This subfamily is founded on the genus *Platyrhinus* Clairville and Schellenberg (1798):

Following out the plan of classification, the groups of Lacordaire may be considered as hereby raised to tribal value, but a rearrangement of them will probably be necessary.

In the arrangement here proposed for the North American tribes an attempt is made to begin with the forms nearest approaching the Bruchioidea (Bruchidae) and close with the forms having the greatest modification of beak, thus approaching the Curculionoidea.

TABLE OF NORTH AMERICAN TRIBES OF PLATYRHININAE

- | | |
|---|----------------------------|
| 1. Beak not or hardly longer than head..... | 2. |
| Beak elongate; antennae of male longer than those of female..... | 4. |
| 2. Scrobes dorsolateral, subterminal; antennae of male longer than those of female..... | Discotenini, new tribe. |
| Scrobes lateral, foveiform, almost always covered by lateral margin of beak..... | 3. |
| 3. Eyes emarginate; scrobes large, median, irregular .. | Phaenithonini, new tribe. |
| Eyes entire..... | Platyrhinini Bedel (1882). |
| 4. Eyes more or less approximate on the front..... | Eurymycterini, new tribe. |
| Eyes lateral | 5. |
| 5. Eyes rounded..... | Allandrini, new tribe. |
| Eyes oblong-oval, longitudinal..... | Meconemini, new tribe. |

DISCOTENINI, NEW TRIBE

Genus DISCOTENES Labram and Imhoff

Discotenes LABRAM and IMHOFF, Singulorum generum Curculionidum, 1842, part 1.

Type, coelebs Labram and Imhoff, monotype.

Phanosolena SCHAEFFER, Journ. N. Y. Ent. Soc., 1904, vol. 12, p. 234.

Type, nigrotuberculata Schaeffer, monotype.

Two species are described for North America, and these may be separated by the following table:

TABLE OF NORTH AMERICAN SPECIES OF DISCOTENES

- | | |
|--|------------------------------------|
| Eyes very close to antennal scrobes; body black beneath, ochraceous above, variegated with black patches on thorax and elytra. | <i>nigrotuberculata</i> Schaeffer. |
| Eyes distinctly separated from antennal scrobes; larger and darker, beak of male on each side above antennal fossae very convex, impressed on median line..... | <i>arizonica</i> Schaeffer. |

DISCOTENES ARIZONICA Schaeffer

Phanosolena arizonica SCHAEFFER, Trans. Amer. Ent. Soc., 1906, vol. 32, p. 269.

No specimens attributable to the species are found in the collections of the United States National Museum. It is recorded from the Huachuca Mountains, Arizona, August 10.

DISCOTENES NIGROTUBERCULATA Schaeffer

Phanosolena nigrotuberculata SCHAEFFER, Journ. N. Y. Ent. Soc., 1904, vol. 12, p. 235.

This species is described from Brownsville, Tex. The National Museum collection contains nine specimens from this locality, collected by C. H. T. Townsend, June 7, 1895; Hubbard and Schwarz, June 9; H. S. Barber, May 8, 1904; and Jones and Pratt, March 20, 1908 (six specimens).

A complete series of drawings of the characters of this species is given and will serve for comparison of these characters as we progress through the group.

The drawings of the upper (fig. 1), side (fig. 2), and under (fig. 3) views of the head are sufficient to present the essential characters of this tribe and genus, which is characterized by the shortness of the beak and the shape of the scrobes and eyes. Figures are also given of the thoracic sternal characters (fig. 4), the mouth parts (figs. 5, 6, 7), the differences of the antennae in the two sexes (fig. 8), the wing venation (fig. 9), the protarsus (fig. 10), the protarsal claw (fig. 11), the pygidium (fig. 12), and the female genitalia (fig. 13).

As the mouth parts of this family have not been carefully studied, considerable attention will be given to them in this paper.

The maxilla (fig. 6) is quite primitive in that it consists of an elongate cardo; a basal piece to stipes; the main portion of stipes strongly two lobed; the outer lobe or lacinia being provided with strong double series of bristles; and the long fingerlike inner lobe, or galea, which is narrowly but deeply cleft from the lacinia and with a brush of bristles at tip; the basal joint of the palpus small, the second very large and quadrate, the third small, and fourth elongate fingerlike. The last three palpal joints are dark brown, the remainder of the maxilla is transparent yellowish.

The mentum is a small segment to which the labium is attached (fig. 7). The labium is transverse, brownish, poorly defined, differing only from ligula in color. The ligula is yellow, shallowly bilobed. The palpi are attached on the diagonal sides of the labium, three jointed, light brown. The hypopharynx or inner side of labium and ligula is provided with a strong series of bristles in several rows on each side of the middle.

The wing venation (fig. 9) is in general characteristic of the Rhynchophora, but has its special characteristics. The costa is marginal and basal only. The subcosta is over twice as long and apically merged with the radius which from here to the node or transverse fold becomes submarginal. Behind the radius is the faint outline of the radial sector. Medius is a strong vein bracing the middle of the wing and at the transverse fold branches forward in a hooklike process and almost at right angles behind. The cubitus is a fine straight vein. At the transverse fold the radial vein is badly broken and a distinct but small triangular cell is formed. Two severed portions of radius appear in the apical half of the wing.

The pygidium (fig. 12) is distinctly furrowed for the reception of the elytral margin. The female genitalia (fig. 13) are provided at apex with four more or less blunt teeth. The male genitalia are elongate and slender.

The third tarsal joint is bilobed and not included in the second but is placed at its apex, a character found in the Bruchidae.

PHAENITHONINI, NEW TRIBE

TABLE OF GENERA OF NORTH AMERICAN PHAENITHONINI

- | | |
|---|--------------------------------|
| 1. Beak apically truncate, quadrate----- | 2. |
| Beak obliquely rounded at apical angles----- | <i>Griburiosoma</i> Schaeffer. |
| 2. Club small, solid, joints very indistinct (fig. 17)----- | <i>Ormiscus</i> Waterhouse. |
| Club distinctly three jointed----- | <i>Toxotropis</i> LeConte. |

Genus ORMISCUS Waterhouse

Ormiscus WATERHOUSE, Ann. Mag. Nat. Hist., 1845, vol. 16, p. 37. *Type*.—*variegatus* Waterhouse, monotype.

Hormiscus GEMMINGER and HAROLD, Cat. Col., 1872, vol. 9, p. 2738 (emendation).

TABLE OF NORTH AMERICAN SPECIES OF ORMISCUS

- | | |
|---|---------------------------------|
| 1. Scutellar carina angulate at middle----- | 2. |
| Scutellar carina arcuate at middle (figs, 21, 22)----- | <i>solidus</i> , new species. |
| 2. Scutellar carina more sharply and narrowly angulate (figs. 17-20). | |
| | <i>saltator</i> LeConte. |
| Scutellar carina broadly angulate (figs. 14-16)----- | <i>angulatus</i> , new species. |

ORMISCUS ANGULATUS, new species

Described principally from a specimen collected at Dallas, Tex., April 15, 1908, by Hunter and Pratt.

Length, 2.1 mm.; breadth 1 mm. Color black with gray pubescence arranged in fasciae.

Head convex, beak transversely broadly impressed; head and thorax closely punctate and pubescent. Funicular joints of antennae longer than broad; diminishing in size to seventh which is about as broad as long. Club compact, slightly longer than last three funicular joints, three jointed. Eyes slightly emarginate. Pronotum convex, sharply angulate at apices of scutellar carina, which is broadly angulate at center and does not extend forward on the sides. (Fig. 14.)

The pleural suture is represented by a distinct sinuate smooth line, as illustrated. (Fig. 15.) The centrosternal piece is distinct and triangular. (Fig. 16.) The pronotum is strongly and densely punctate and pubescent, the hairs being concolorous with the body except at the anterior corners and on each side of the scutellar carina. Elytra with two transverse bands of whitish pubescence, one dividing the elytra into three subequal brownish areas; the anterior band is connected with the base by sutural and humeral white areas. Scattered white areas on posterior declivity. The metasternum is medially impressed behind. The abdominal segments are strongly arched forward. The pygidium is grooved at base. Tarsal claws toothed.

Type.—Cat. No. 41357, U.S.N.M.

Specimens are at hand as follows: Texas (Belfrage collection labeled *Hormiscus saltator*); a paratype with same data as the type but measuring only 1.5 mm. in length; topotypes from Dallas collected May 16 and 18, 1907 (E. A. Schwarz), April 25, 1907 (Schwarz and Pratt), March 28, 1906 (W. E. Hinds); also a brownish specimen measuring 1.75 mm. from Victoria, Tex., April 1 (E. A. Schwarz) and a typical specimen from Nebraska City, Nebr., June. Some specimens have more whitish pubescence on the elytra than others.

ORMISCUS SALTATOR LeConte

Hormiscus saltator LECONTE, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 397.

The characteristics of this species and genus are illustrated in Figures 17, 18, 19, 20.

This species is readily identified by the angle of the scutellar carina. The elytra have a distinct transverse white fascia near the base and only scattered white hairs behind.

This species was taken on dead branches of osage orange (*Toxylon pomiferum*) by Dury (Beutenmüller, 1893). It breeds in dead wood of deciduous trees (Smith, 1900; Ulke, 1902). The species occurs from New York to Florida and west to Nebraska and Texas. Two specimens were bred March 14, 1900, from galls of "*A. cornigera*" collected at Hartford, Conn. ["*A. cornigera*" doubtless refers to the Cynipid, *Andricus cornigera* Osten Sacken. (Ed.)]

ORMISCUS SOLIDUS, new species

This species is based on a specimen collected at Brownsville, Tex., by C. R. Jones and F. C. Pratt, March 20, 1908.

The eyes are not so emarginate as in *saltator*. The prothoracic carina (fig. 21) is sinuate or roundly emarginate. The tarsal claws are cleft or toothed. Figure 22 illustrates the posterior tarsal claw:

Type.—Cat. No. 41358, U.S.N.M.

Genus TOXOTROPIS LeConte

Toxotropis LECONTE, Proc. Amer. Philos. Soc., 1876, vol. 15, pp. 397-398. *Type*, *pusillus* LeConte, designated by Jordan (1906).

Gonops LECONTE, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 399. *Type*, *fissunguis* LeConte, monotype.

TABLE OF NORTH AMERICAN SPECIES OF TOXOTROPIS

- | | |
|--|------------------------------|
| 1. Claws simple; vestiture inconspicuous and very sparse | <i>simplex</i> , new species |
| Claws toothed | 2. |
| Claws cleft almost to base; eyes strongly emarginate | <i>fissunguis</i> LeConte. |
| 2. Elytra not tuberculate | 3. |
| Elytra six tuberculate on the third intervals | 13. |

3. Tarsal claws minutely and indistinctly toothed.....4.
 Tarsal claws distinctly provided with a more or less slender tooth.....6.
4. Prothoracic carina sinuate, broadly rounded at middle.....5.
 Prothoracic carina regularly but shallowly convex.....*sparsus*, new species.
5. Prothoracic carina strongly arcuate; vestiture of elytra tessellate.
pusillus LeConte.
 Prothoracic carina feebly arcuate; elytra with posterior half clad with
 darker vestiture.....*approximatus* LeConte.
6. Antennae light yellowish or reddish throughout and very long and slender;
 elytra with a dark transverse fascia at about the middle.
fasciatus LeConte.
- Antennae partly dark.....7.
7. Antennal funicle light reddish or brownish, club much darker.....8.
 Antennae dark throughout, except sometimes the basal joints.....11.
8. Prothoracic carina not very near to base at middle.....9.
 Prothoracic carina very near to base at middle.....10.
9. Femora light only at base; tibiae and tarsi light except at tips; elytra with
 a dark sutural spot at middle.....*quercus* Schaeffer.
 Legs light except at tips of tibiae and tarsal joints, which are darker;
 elytra mottled.....*irroratus* Schaeffer.
10. Legs reddish except at tips of tibiae and tarsal joints, which are darker;
 elytra with two dark basal and two dark median spots.
quadrimaculatus, new species.
 Legs dark, reddish; elytra marmorate with a faint indication of two basal
 dark spots.....*eusphyroides* Schaeffer.
11. Antennae black.....12.
 Antennae with first joint light; elytra darkening at base and with two
 dark lateral spots at middle.....*mitchelli*, new species.
12. Elytra brown or black with a prominent white sub-basal fascia curved on
 each elytron to meet scutellum.....*albofasciatus* Schaeffer.
 Elytra with two dark basal spots and two discal dark transverse fasciae.
submetallicus Schaeffer.
13. Thoracic carina broadly rounded.....*sextuberculatus* Schaeffer.
 Thoracic carina narrowly rounded.....*victoriensis*, new species.

TOXOTROPIS SIMPLEX, new species

Described from a single specimen in the Hubbard and Schwarz collection from St. Catherine Island, Georgia, April 20.

Length, 2 mm. Dark reddish brown with gray pubescence. Beak flat, punctate, densely pubescent. Antennal joints longer than broad, diminishing in size, club distinctly three jointed. Eyes slightly emarginate. Prothoracic ridge very broadly arcuate behind, sinuate towards sides. Vestiture very fine, sparse and more or less irregular. Elytral striae punctures distinct. Tarsal claws divaricate, slender and simple.

Type.—Cat. No. 41359, U.S.N.M.

TOXOTROPIS PUSILLUS LeConte

Toxotropis pusillus LeConte, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 398.

Occurs at Key West, Florida, in April.

TOXOTROPIS APPROXIMATUS LeConte

Toxotropis approximatus LeCONTE, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 398.

Occurs in California. Has been beaten from dead twigs of live oaks (*Quercus*) in June (Fall, 1901*b*).

TOXOTROPIS SPARSUS, new species

Described from one specimen collected at Dallas, Tex., April 25, 1907 by E. A. Schwarz and F. C. Pratt.

Length, 1.5 mm. Dark brownish black with grayish pubescence. Beak flat, punctate, pubescent. Antennal joints slender, small and very little longer than wide, diminishing toward club. Club distinctly three jointed. Eyes emarginate. Prothoracic ridge regularly convex from side to side. Vestiture very fine and sparse, densest in basal area of elytra. Elytral striae punctation distinct. Tarsal claws minutely toothed.

Type.—Cat. No. 41360, U.S.N.M.

TOXOTROPIS FASCIATUS LeConte

Toxotropis fasciatus LeCONTE, Trans. Amer. Ent. Soc., 1884, vol. 12, p. 32.

Very abundant in Texas and Louisiana from April to June, and also found in Maryland, New Jersey and New York.

TOXOTROPIS QUERCUS Schaeffer

Toxotropis quercus SCHAEFFER, Trans. Amer. Ent. Soc., 1906, vol. 32, p. 270.

Occurs in the Huachuca and Chiricahua Mts., Arizona.

TOXOTROPIS IRRORATUS Schaeffer

Toxotropis irroratus SCHAEFFER, Journ. N. Y. Ent. Soc., 1904, vol. 12, p. 233.

Is common at Brownsville, Texas and nearby places from April to July.

TOXOTROPIS QUADRIMACULATUS, new species

Described principally from a specimen from Haw Creek, Florida, collected June 10, in the Hubbard and Schwarz collection.

Length, 2.75 mm. Light reddish brown, tessellated with dense brown and yellowish pubescence, with four large brown spots, two at the base of the elytra and two about the middle. Pubescence beneath sparser and uniform grayish. Beak flat, punctate, sparsely pubescent, apically shallowly emarginate. Antennae light brown, with club darker, joints elongate, slender; club elongate, distinctly jointed. Eyes sharply emarginate. Prothoracic ridge very strongly arcuate at middle and quite close to the base. Tarsal claws slender and with a long fine tooth.

Type.—Cat. No. 41361, U.S.N.M.

Material is also at hand from Crescent City, Fla., July 6, and Fort Monroe, Va., April 19 (Hubbard and Schwarz); Washington, D. C. (Linell); Jackson, Ala., April 19, 1910 (Pierce) (two specimens; Mobile and Oak Grove, Ala., June 15, 17 (Soltau); New Orleans, La., June 13 (Soltau) (two specimens); Tallulah, La., bred from fig wood May 3, 1910 (Cushman); Meridian, Miss. February 6, June 11, 1898 (Soltau) (three specimens).

TOXOTROPIS EUSPHYROIDES Schaeffer

Toxotropis eusphyroides SCHAEFFER, Trans. Amer. Ent. Soc., 1906, vol. 32, p. 270.

Occurs at Brownsville, Tex., April to July.

TOXOTROPIS SUBMETALLICUS Schaeffer

Toxotropis submetallicus SCHAEFFER, Journ. N. Y. Ent. Soc., 1904, vol. 12, p. 234.

Occurs at various points in south Texas, March to August.

TOXOTROPIS ALBOFASCIATUS Schaeffer

Toxotropis albofasciatus SCHAEFFER, Trans. Amer. Ent. Soc., 1906, vol. 32, p. 271.

Occurs at various points in south Texas, March to July. Taken on anacahuita (*Cordia boissieri*) May 30, 1910, at Gregory, Tex. (Pierce).

TOXOTROPIS MITCHELLI, new species

Described from 41 specimens bred from stems of *Xanthium* by J. D. Mitchell at Victoria, Tex., in March, April, and May, 1908.

Length, 2 mm. Brown, clad with dark and pale scales to form a more or less definite pattern, marked principally by two dark basal spots on the elytra and two dark lateral spots at the middle of the elytra. Legs, especially at the basal portions of the tibiae, lighter and more yellowish brown; tarsi black. Antennae dark, with basal joints lighter. Beak flat, pubescent, punctate. Eyes rather deeply emarginate. Antennal funicle slender, joints elongate, becoming shorter toward club which is rather elongate. Prothoracic ridge strongly arcuate at middle. Tarsal claws with a long slender tooth.

Type.—Cat. No. 41362, U.S.N.M.

The species has also been collected on *Xanthium* at Victoria, Tex., April 15, 16 by J. D. Mitchell; bred from *Solanum rostratum* stems at Victoria in March and April (Mitchell); bred from *Ambrosia trifida* and *A. psilostachya* stems at Victoria from February to April (Mitchell, Hinds); bred from *Iva ciliata* stems at Victoria in

February (Mitchell); bred from *Helianthus* stems at Victoria in April (Mitchell); collected on *Acuan illinoensis* at Victoria in June (Cushman); collected at Corpus Christi (Schwarz) and Brownsville (Schwarz, Jones, and Pratt). In Louisiana it was bred in October from pods of *Datura stramonium* collected at Ferriday in August.

TOXOTROPIS VICTORIENSIS, new species

Described from three specimens collected by E. A. Schwarz at Victoria, Tex., March 21, April 3, and 5.

Length, 2.2 to 2.6 mm. Very dark blackish brown, with dark brown, black, white, and golden pubescence, and with six elytral tubercles. Legs reddish. The white pubescence occurs in a patch on the median line of the prothorax near the apex and another near the base, on the scutellum, mixed with the golden beneath and scattered inconspicuously above. The golden pubescence occurs all over the body, but most conspicuously on the head and beak and underneath. The black pubescence is suberect on the six tubercles and occurs also in little scattered spots. The brown is generally mixed with the other colors. Beak flat, pubescent, punctate, apex sinuate. Antennal funicle with joints elongate, club long. Eyes emarginate. Third elytral interval trituberculate. Tarsal claws armed with a very long slender tooth.

Type.—Cat. No. 41363, U.S.N.M.

TOXOTROPIS FISSUNGUIS LeConte

Gonops fissunguis LECONTE, Proc. Amer. Philo's. Soc., 1876, vol. 15, p. 398.

Occurs in California.

TOXOTROPIS SEXTUBERCULATUS Schaeffer

Toxotropis sextuberculatus SCHAEFFER, Trans. Amer. Ent. Soc., 1906, vol. 32, p. 269.

Occurs at Enterprise and Lake Worth, Florida.

Genus GRIBURIOSOMA Schaeffer

Griburiosoma SCHAEFFER, Trans. Amer. Ent. Soc., 1906, vol. 32, p. 272.

Type, *platanum* Schaeffer, monotype.

This genus may possibly have to be combined with *Ormiscus*.

GRIBURIOSOMA PLATANUM Schaeffer

Griburiosoma platanum SCHAEFFER, Trans. Amer. Ent. Soc., 1906, vol. 32, p. 273.

This species was taken from dead branches of sycamore (*Platanus* sp.) in the Huachuca Mountains, Ariz. (Schaeffer, 1906).

TRIBE PLATYRHININI BEDEL (1882)

Tropiderini KLEINE, Entomologischen Blättern, 1910.

Only one genus occurs in North America. The weevils of this tribe breed under the bark of dying branches and trunks of trees.

TABLE OF GENERA¹

Transverse ridge of prothorax converging to base at middle; sides of prothorax behind middle strongly widened; eyes broadly separated, small, prominent; antennae short, with an apparently loosely jointed club.

Platyrhinus Clairville.

Transverse carina parallel with the base; sides of prothorax straight, sometimes slightly widened; eyes large, depressed, more or less approximate beneath.

Tropideres Schönherr.

Genus PLATYRHINUS Clairville

Platyrhinus CLAIRVILLE, Entomologie Helvetique, 1798, vol. 1, p. 112. *Type*, (*costirostris* Clairville) designated by Latreille, 1810=(*latirostris* Fabricius)=*resinosus* Scopoli (Ent. Carn., p. 24).

Anthrribus FABRICIUS, Nova Insectorum Genera, 1790, p. 213 (not Geoffroy, 1762, Forster, 1771, DeGeer, 1775, Müller, 1776, Forster, 1781, Geoffroy, 1785).

Platyrhinus GEMMINGER and HAROLD, Cat. Col., 1872, vol. 9, p. 2732. (Emendation.)

Platyrhinus resinosus Scopoli (*latirostris* Fabricius) inhabits fungi growing upon ash trees in England. It has also been found in *Sphaeria fraxinea* (Westwood 1839), on decaying oak stump highly charged with mycelia of a fungus (Rivers, 1886). The larvae breed under the bark of decaying twigs of *Carpinus betulus* Linnaeus, *Fraxinus excelsior* Linnaeus, *Betula alba* Linnaeus, *Alnus glutinosa* Gaertner, *Fagus sylvatica* Linnaeus, and *Ulmus* spp., (Kleine, 1910, E. B. 45). Breeds also in dead wood of *Quercus* (Schaufuss 1914, 1026.)

Genus TROPIDERES Schönherr

Tropideres SCHÖNHERR, Isis von Oken, 1823, Heft 10, p. 1135. *Type*, *albirostris* Fabricius.

Tropideres SCHÖNHERR, Curc. Disp. Meth., 1826, p. 35. *Type*, *albirostris* (Herbst), Fabricius by original designation.

Enedreytes SCHÖNHERR, Gen. et sp. Curc., 1839, vol. 5, p. 215. *Type*, *hilaris* Fahraeus.

Enedreutes LACORDAIRE, Gen. Col., 1866, vol. 7, p. 536.

Tropidoderes GEMMINGER and HAROLD, Cat. Col., 1872, p. 2733.

The above synonymy is according to Bovie. He writes that this genus does not occur in North America, although he quotes *bimaculatus* Olivier in the genus. I can find no essential reason for not including the following species in this genus. The eyes are entire in all of them. The species all breed under the bark of decaying wood.

¹ After Schaufuss, Calwer's Käferbuch, 1916, p. 1026.

TABLE OF NORTH AMERICAN SPECIES OF TROPIDERES

1. Body elongate, prothorax set off from elytra by the constriction behind the prothoracic ridge. Epistoma apically bidentate-----2.
Body compact; prothorax set close to elytra, constriction behind ridge not so strong. Epistoma apically emarginate, not dentate----*rectus* LeConte.
2. Sides of prothorax strongly sinuate, due to prominence of lateral prolongations of prothoracic ridge-----*bimaculatus* Olivier.
Sides of prothorax almost evenly rounded-----*barberi*, new species.

TROPIDERES BIMACULATUS Olivier

Macrocephalus bimaculatus OLIVIER, Entomologie, 1795, vol. 4, no. 80, p. 14, pl. 2, fig. 11.

Anthribus quadrinotatus SAY, Journ. Acad. Nat. Sci. Phila., 1827, vol. 2, p. 249.

Material is at hand from Staten Island, N. Y. (H. Soltau); Washington, D. C., July 13 (Hubbard and Schwarz); Afton, Va. (Hubbard and Schwarz); Memphis, Tenn., September 5 (H. Soltau); Cincinnati, Ohio, June 24, 29 (H. Soltau); St. Louis, Mo., March 17 (H. Soltau); Tallulah, La., March 5, 1910 (R. A. Cushman); Bayou Sara, La., January 24, 1879 (Hubbard and Schwarz); Meridian, Miss., February 10, 11, 1879 (E. A. Schwarz). It is found on dead twigs.

The accompanying sketches illustrate the face (fig. 23), under side of head and mouth parts (fig. 24), side of head (fig. 25), protarsal claw (fig. 26), metatarsal claw (fig. 27).

The mesotarsal claw is toothed, and the metatarsal claw slightly appendiculate in one view.

TROPIDERES BARBERI, new species

Length, 3-3.5 mm. Similar to *T. bimaculatus* in general markings and appearance but differing by having the punctuation of the head and thorax much finer, and the sides of the prothorax evenly convex. The angles of the apical emargination of the beak are never acute, dentiform as in *bimaculatus*. The elytral tuberculation is almost obsolete.

Described from eight specimens collected at Esperanza Ranch and at Los Borregos, near Brownsville, Tex., May 18 to June 6, 1904, by H. S. Barber.

Type and Paratypes.—Cat. No. 41364, U.S.N.M.

Figure 28 illustrates the protarsus, and shows the partially concealed third joint typical of Platystomidae and Choragidae.

TROPIDERES RECTUS LeConte

Tropideres rectus LECONTE, Proc. Amer. Philos. Soc., 1876, vol. 15, pp. 395-396.

Material is at hand from Washington, D. C., July 30 (Hubbard and Schwarz); Savannah, Ga. (Hubbard and Schwarz); Biscayne,

Fla., April 29–May 13 (Hubbard and Schwarz, M. Linell); Key West, Fla., April (Hubbard and Schwarz); Meridian, Miss., June 11, 1898 (H. Soltan); Columbus, Tex., May 30–June 3 (Hubbard and Schwarz).

This species also is taken on dead twigs and branches (Schwarz, 1878; Ulke, 1902). It occurs from Florida northward to the District of Columbia and westward to Texas.

The following notes on European species throw light on the habits of the genus.

Tropideres albirostris Herbst of Europe breeds in dead wood of beech (*Fagus* sp.), oak (*Quercus* spp.) and poplar (*Populus* spp.) (Bedel, 1885). On dead trees of *Tilia*, *Fagus*, *Alnus*, *Betula*, *Quercus*, *Salix*, *Prunus cerasus*, *Prunus communis*, *Rhus*, *Populus*, May to July (Schaufuss, 1914, p. 1027). Breeds in dead twigs of *Betula alba* Linneaus, *Tilia grandiflora* Ehrh., *Tilia parvifolia* Ehrhart, *Fagus silvatica* Linneaus and *Alnus glutinosa* Gaertner (Kleine, 1910, 46).

Tropideres dorsalis Thunberg of Europe is found on dry branches of *Quercus* and *Betula* in May (Schaufuss 1914, p. 1027).

Tropideres marchicus Herbst of Europe breeds in dead wood of fruit trees, especially peach (*Amygdalis persica*), also on young elm (*Ulmus* sp.) (Bedel 1885). Breeds under the bark of dead twigs of *Prunus domestica*, *Quercus*, *Salix*, and *Populus* (Kleine 1910). On dry twigs of *Salix*, *Populus*, *Quercus*, *Prunus*, and *Amygdalis* (peach), the larvae being found under the bark (Schaufuss, 1914, p. 1027).

Tropideres niveirostris Fabricius of Europe breeds in dead branches, fagots, and hedges of oak (*Quercus* spp.), hazelnut (*Corylus* spp.), beech (*Fagus* sp.) and linden (*Tilia* sp.) (Bedel 1885). On dead trees and dry branches of *Salix*, *Quercus*, *Tilia* and *Corylus* (Schaufuss, 1914, 1027). Breeds in dead branches of *Fagus silvatica* and *Salix capraea* (Kleine, 1910).

Tropideres pudens Gyllenhal of Europe breeds in dead branches of oak (*Quercus* sp.) (Bedel, 1885).

Tropideres sepicola Fabricius of Europe breeds in dead branches of oak (*Quercus* sp.) and *Carpinus* sp. (Bedel, 1885).

Tropideres undulatus Panzer of Europe breeds in dead branches of fruit trees (Bedel, 1885). In dead branches of *Quercus* (Schaufuss, 1914, p. 1027).

Tropideres hilaris Fahraeus of Europe breeds in the base of Scotch broom (*Cytisus scoparius* Link). The female oviposits in the root crown (Bedel, 1885).

Tropideres oxyacanthae Ch. Brisout of Europe breeds in the trunks of small dead beech (*Fagus* sp.), sometimes in numbers; in

dead wood of hawthorn (*Crataegus* sp.), and chestnut (*Castanea* sp.). The larva makes its gallery in the sapwood (Bedel, 1885). Also in dry twigs of *Carpinus* (Schaufuss, 1914, 1027).

EURMYCTERINI, NEW TRIBE

This tribe is founded on two American genera, *Eurymycter* LeConte and *Gonotropis* LeConte; with large eyes; flattened beak, narrower at base than head and enlarged apically; lateral foveiform scrobes covered by the lateral margin of the beak; and different sized antennae in the two sexes.

TABLE OF GENERA

Prothoracic ridge strongly angulated and approaching the base at the middle; claws minutely toothed.....	<i>Gonotropis</i> LeConte.
Prothoracic ridge straight at the middle, base deeply biemarginate; claws acutely toothed.....	<i>Eurymycter</i> LeConte.

Genus GONOTROPIS LeConte

Gonotropis LECONTE, Proc. Amer. Philos. Soc., 1876, vol. 15, pp. 393-394. *Type*, *gibbosus* LeConte, monotype.

Only one species occurs in the United States.

GONOTROPIS GIBBOSUS LeConte

Gonotropis gibbosus LECONTE, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 394.

Occurs in Colorado. It is represented in the United States National Museum from Marquette, Michigan, June 26-July 29 (Hubbard and Schwartz) and Dundee, New York, June 13 (Hubbard and Schwarz).

This species has been described as having simple claws but the accompanying sketch (fig. 36) shows that there is a minute tooth.

The face is figured in figure 29, side of head in figure 30, underside of head in figure 31, inner view of maxillae in figure 32.

The prothorax (figs. 33 and 34) shows more primitive characters than *Allandrus* or *Meconemus* as well as *Eurymycter* in that practically all of the principal thoracic areas are more or less delineated. The anterior margin has a narrow strip which includes the postocular lobes and corresponds to the pretergite. On the venter viewed from the side there is a constriction near the apex which may be said to limit the presternite. This line is faintly indicated to the dorsum and indicates the praescutal area above. The well-known prebasal ridge is the limiting line for the base and sides of scutellum. The scutem and scutellum are faintly separable by a transverse elevation extending toward the terminus of the lateral ridge. From this point on to the lateral ridge the only definite suture of the pro-

thorax extends downward almost to the coxa and then is flexed backward to the posterior corner of the coxal cavity. This is the pleural suture. (Fig. 34). In front of it is the episternum and behind it the epimeron. The lateral ridge extends faintly forward from the pleural suture and connects with a very faint transverse line which separates the episternum from the basisternite. The basisternite (Fig. 35) between the coxae is acutely terminated. Its apex just barely separates the coxae and meets the acute apex of the so-called intercoxal piece. This piece is often triangular, but in the present genus it is fused with the epimera. The posterior slope of the dorsum behind the prebasal ridge is divided transversely by a lesser ridge on the declivity, which laterally turns forward and meets the other ridge, thus definitely defining the posttergite. The area behind this is continuous with the epimeron and is probably the postscutellum.

Genus EURYMYCTER LeConte

Eurymycter LeConte, Proc. Amer. Philos. Soc., 1876, vol. 15, pp. 394, 395. *Type, fasciatus* Olivier, monotype.

This genus has for a long time been considered to contain but one species. A careful study of the series in the United States National Museum has, however, revealed several species which are differentiated by the following table. All have the prominent white band across the posterior half of the elytra, and the face white.

TABLE OF SPECIES OF EURYMYCTER

- | | |
|---|----------------------------|
| 1. Profile of front between eyes almost level, ocular ridge indistinct; underside of abdomen clothed with white..... | 2. |
| Profile of front between eyes concave, ocular ridges strongly elevated; underside of abdomen not densely clothed with white..... | 4. |
| 2. Elytra with one elevated interval, the third; fascia very broad and more regular in outline than in the following species; beak lightly tricarinate; thoracic carina arched forward..... | latifascia, new species. |
| Elytra with alternate intervals elevated or more densely pubescent in crossing the transverse fascia, which is irregular in outline, thoracic carina almost straight..... | 3. |
| 3. Beak strongly bicarinate..... | bicarinatus, new species. |
| Beak less strongly carinate, the two lateral carinae farther apart than in <i>bicarinatus</i> and with a third or median carina in the basal portion of the beak..... | fasciatus Olivier. |
| 4. Elytra more strikingly tuberculate, alternate intervals elevated, beak distinctly tricarinate; thoracic carina angulate or curved backward. | |
| | tricarinatus, new species. |

A character is evident in this genus which has not been observed in the preceding genera, that is the trace of a deep suture beneath the eye. This is of variable length in the genus. It is a little dif-

difficult to know how far species differentiation should go in this genus. The author has tried to be conservative in dealing with this genus which shows so many diverging characters.

EURYMYCTER LATIFASCIA, new species

Described principally from a specimen from Buffalo, N. Y., in the Hubbard and Schwarz collection.

Length, 7 mm., breadth, 3.2 mm. This species hitherto confused with *fasciatus* Olivier differs in a number of respects. In *fasciatus* the thoracic carina is almost straight at the middle, and laterally forms a tubercle at its basal angle and also at its apex. In the new species the carina is slightly arcuate anteriorly at the middle, and laterally curves concavely from a not prominent basal angle to an acute tubercle at its apex. The median line of the beak is less distinct than in *tricarinatus*. The elytra are smoother and only the third interval is distinctly elevated in *latifascia*, while in *fasciatus*, etc., the third, fifth and seventh are elevated. The outlines of the fascia in *fasciatus* are very irregular and angulate, and the fascia is narrower than in *latifascia*, which has the outlines of this band much more even.

A second specimen measuring 5 mm. is at hand from Ontario.

Type and paratype.—Cat. No. 41365, U.S.N.M.

EURYMYCTER BICARINATUS, new species

Described from a single specimen from Tenino, Washington in the Hubbard and Schwarz collection.

Length, 8.5 mm., breadth, 4 mm. This species hitherto confused with *fasciatus* Olivier differs in several respects. The rostral carinae are close together and very prominent, with no room for a median carina between them as in *fasciatus*; the elytral fascia is broader, the striae punctures are irregular in length, many quite elongate; the thoracic carina is even straighter than in *fasciatus*; the thoracic sculpture is coarser and deeper.

Type.—Cat. No. 41366, U.S.N.M.

EURYMYCTER FASCIATUS Olivier

Macrocephalus fasciatus OLIVIER, Entomologie, 1795, vol. 4, No. 80, p. 9, pl. 1, fig. 9.

The specimen at hand which most nearly answers the description of this species, originally described from Georgia, is from Crescent City, Fla., in the Hubbard and Schwarz collection, labeled January 12. This has an almost straight basal thoracic carina; two

distinct rostral carinae with a less distinct median basal carina; indistinct ocular carinae; narrow, irregular white fascia; abdomen white beneath; alternate elytral intervals slightly elevated, more densely pubescent on the fascia; dorsal profile very slightly sinuate.

Length, 8 mm., breadth 3.25 mm. Figure 37 illustrates the face, Figure 38 dorsum of head, Figure 39 the dorsum of thorax, and Figure 40 side of thorax and elytron.

Further material associated under this species is from South Carolina, (Riley); Meridian, Miss., June 11, 1898, (H. Soltau); Victoria, Tex., April 16, 1911, (J. D. Mitchell), on *Xanthoxylum clava-herculis*; East Tennessee, (Dr. Fox); Bladensburg, Md., July 7, (Hubbard and Schwarz); Staten Island, N. Y., (M. L. Linell); Detroit, Mich., (Hubbard and Schwarz) and Marquette, Mich., July 8, (Hubbard and Schwarz.)

The smallest specimen, the one from Tennessee, measures 6.5 mm. by 2.7 mm.

EURYMYCTER TRICARINATUS, new species

Described principally from a specimen from Branchtown, Pa., collected by W. J. Roberts.

Length, 7 mm., breadth, 3.1. Rostrum distinctly tricarinate; ocular carinae strong; prothoracic carina angulate or posteriorly curved backward; elytral fascia narrow, irregular; alternate elytral intervals elevated, more densely pubescent, with white beneath; abdomen not thickly clad, dorsal profile strongly sinuate.

Type and nineteen paratypes.—Cat. No. 41367, U.S.N.M.

Further material is at hand from Stone Creek, Lee County, Va. (Hubbard and Schwarz) four specimens; Retreat, N. C., June 2 (Hubbard and Schwarz); Washington, D. C., June 1 (Hubbard and Schwarz); Milwaukee, Wis., July 7, 1893 (H. Soltau) two specimens; Cincinnati, Ohio, August 22, June 29 (H. Soltau) eight specimens; Kentucky, Ind., two specimens.

Figure 41 illustrates the top of head, Figure 42 the underside of head, Figure 43 the right metatarsus, and Figure 44 the right metatarsal claws.

ALLANDRINI, NEW TRIBE

This is founded on a single genus, *Allandrus* LeConte. It is distinguished from the Eurymycterini by the lateral eyes.

Genus ALLANDRUS LeConte

Allandrus LeConte, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 396. *Type*, *bifasciatus* LeConte, monotype.

TABLE OF SPECIES OF ALLANDRUS²

Claws strongly divergent, antennae and legs black; male beak flat with smooth median line, female beak usually without line-----*populi*, new species.
 Claws more approximate, toothed; antennae and legs tinged with rufous; male beak with median line crested; female beak with slightly raised median line-----*bifasciatus* LeConte.

ALLANDRUS POPULI, new species

Length of male, 3.5 mm.; of female, 2.75-4 mm.

Black throughout, with fine white pubescence sparse on head and prothorax, arranged in fasciae on the elytra and regularly but not closely placed on under sides. Elytral fasciae consisting of an irregular transverse band at basal third, which extends forward on the median line to the prothoracic ridge. Behind the middle the white spots are rather irregular but occupy the greater part of the apical third. The pygidium is also clad with white pubescence. The darker areas are provided with inconspicuous fine black pubescence. Claws (fig. 47) slender, strongly divergent, slightly enlarged or appendiculate near the base.

The beak (fig. 45) of the male has a fine median line which is not in the least crested as in *bifasciatus*. In the female there is not a trace of this line. The male antennae reach to the posterior third of the elytra. The female antennae barely pass the elytral humeri.

²After this treatment was written a species was described as *Allandrus brevicornis* Frost 1920 (Can. Ent., vol. 52, p. 252), the introduction of which into Pierce's key necessitates changes in the copy submitted; and because of the author's absence the undersigned undertook reexamination of the material to guide the editorial changes. Through the kindness of Mr. C. A. Frost, cotypes of *brevicornis* were examined in connection with the Allandri which were before Pierce, as well as other specimens now available—some 82 specimens in all. Three species are now recognizable in this material and the following table and notes may help in their identification:

1. Male with median carina of rostrum strongly developed into a prominent lamella and with front tibiae very strongly curved in middle half, the apical fourth broader and straight. Tarsal claws rather stout, small and with well developed tooth. Canada, Virginia, Iowa-----*bifasciatus* LeConte.
 Male with rostrum not, or very feebly, carinate and with front tibiae simple. Tarsal claws more slender and with, or without, a tooth near middle-----2.

2. Claws with acute tooth near middle. Maine to California-----*brevicornis* Frost.
 Claws without trace of tooth near middle but with inner edge feebly enlarged and sometimes subangulate close to base. Arizona, Idaho, Michigan-----*populi* Pierce.

A. bifasciatus LeConte. Four specimens in the Green collection are labeled "Bred on Linden by A. B. Champlain, Harrisburg, Pa., 1921," and one is from northern Illinois. Other localities represented are Iowa City, Iowa, Sept. 3, 1917 (Buchanan); Prince Edward County, Ontario, April 15, 1915 (Brimley); Canada; and Wisconsin. Of the nine males examined, two have the secondary sexual characters less developed.

A. brevicornis Frost was described from a series of about 14 cotypes, several of which were distributed. Three localities (Edmonton, Alberta; Framingham, Mass.; and Monmouth, Me.) were recorded without designation of holotype or a type locality; and as the first-mentioned locality is represented before me by two kinds of tarsal claws (representing distinct species), the undersigned here designates as lectotype the male of a pair of cotypes mounted on one pin and loaned from the Frost collection, the pin label reading "C. A. Frost, Framingham, VII-18-15, Mass." Two of the seven cotypes now assembled bear locality labels other than those originally mentioned. One of these, from Natick, Mass., "VII-27-'12," is in the Casey collection, and the other, from Sherborn, Mass., was among the five cotypes loaned by Mr. Frost, who had previously deposited a Framingham cotype in the National collection. He now writes that the type locality, about a half mile in

Described principally from one male (type) and eight females taken in bark of *Populus tremuloides* at Williams, Ariz., June 4 to 11, by E. A. Schwarz and H. S. Barber.

Specimens are at hand from Beaver Canon, Idaho, July 23; Park City, Utah, June 18, and Marquette, Mich., July 26 (all in the Hubbard and Schwarz collection).

Figure 46 illustrates the dorsum of the prothorax.

Type and twenty-seven paratypes.—Cat. No. 41402, U.S.N.M.

ALLANDRUS BIFASCIATUS LeConte

Allandrus bifasciatus LeConte, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 396.

Described from Canada. Specimens are at hand from Ontario; Buffalo, N. Y. (H. Soltau); Marquette, Mich., July 30 (Hubbard and Schwarz); Penington Gap, Va., July 8 (Hubbard and Schwarz); Cincinnati, Ohio, August 11 (H. Soltau).

Figure 48 illustrates the under side of the head and Figure 49 the female metatarsal claws.

MECONEMINI, NEW TRIBE

This tribe is founded on the genus *Meconemus* Labram and Imhoff.

Genus MECONEMUS Labram and Imhoff

Ischnocerus SCHÖNHERR, Gen. et Sp. Curc., 1839, vol. 5, p. 192. *Type, infuscatus* Fahraeus (not *Ischnocerus* Gravenhorst 1829).

Meconemus LABRAM and IMHOFF, Singulorum Generum Curculionidum, 1842, vol. 1, No. 40. *Type (tuberculatus* Labram and Imhoff) = *infuscatus* Fahraeus.

extent, covers the intersection of the three townships, but that the old willow trees from which they were taken are now nearly all gone. Two other specimens in the Casey collection were undetermined, one being from the type locality and the other from the Casey farm, Boston Neck, North Kingston, R. I., July 14, 1888. From these nine New England specimens I can not satisfactorily distinguish four of the five specimens from Edmonton, Alberta (the other is referred to *populi*), assembled from the Casey, Buchanan, and Frost collections, or the five specimens from Banff Springs, Alberta; Sisson, Calif.; Bear Paw Mountain, Mont.; and Marquette, Mich. (female and male); in the Hubbard and Schwarz collections, to which varietal rank and a new name had been given in the Pierce manuscript. Another specimen from Garland, Colo. (Schwarz), standing in the Casey collection as *bifasciatus*, is also referred here.

A. populi Pierce. The type set was found on, or in pupal cells in, the bark of quaking aspen in 1901, at which time Mr. Schwarz told of finding the same species on the same host tree in other localities. The 28 specimens which were before Pierce are now further supported by nine more in the Casey collection, adding the localities New Mexico and southwestern Utah (Weidt); and one from the Greene collection, representing Colorado, as well as by a specimen in the Frost collection, labeled "Edmonton, Alta., VII. 16, 1920, F. S. Carr."

It is noteworthy that *brevicornis* and *populi* are represented from two localities. From Marquette, Mich., July 26, 1877, are preserved two specimens, male and female, of *brevicornis* and seven of *populi* (these having been recorded as *Allandrus bifasciatus* LeConte in the "Michigan List," 1878, Proc. Amer. Philos. Soc., vol. 17, p. 643), and from Edmonton, Alberta, July 16, 1920, are two specimens on one pin in the Frost collection, which apparently belong to the two distinct species. These require field evidence of a biological nature to supplement the specific value of the differences in structure of the claws, but it is significant that *brevicornis* has been found on dead willow (Frost), *populi* on aspen bark (Schwarz) and *bifasciatus*, reared from linden (Champlain).

MECONEMUS INFUSCATUS Fahraeus

Ischnocerus infuscatus FAHRAEUS, Schönherr, Gen. et Sp. Curc., 1839, vol. 5, p. 192.

This species occurs in the Southern States from South Carolina³ to Texas and in Mexico. The United States National Museum material is from Brownsville, Devil's River, Columbus and Victoria, Tex.; Baton Rouge and New Orleans, La.; Key West, Biscayne, Enterprise, and Bartow, Fla.; having been collected by Messrs. Hubbard, Schwarz, Barber, Soltau, and Mitchell.

The principal diagnostic characters are illustrated (figs. 50-62). The joints of the antennal club are longer than in *Discotenes*. The view of the underside of the head (fig. 51) shows many differences from *Discotenes*. The two sexes may be separated aside from the differences in the antennae by the side view of the beak. (Fig. 50.) The protarsal claw (fig. 61) is quite different from *Discotenes*. A view of the female genitalia (fig. 62) is also given which also shows the pygidial groove. A fine sketch of the thoracic sternal plates is presented. (Fig. 58.) Finally the mouth parts have been illustrated from slide mounts.

The labrum (fig. 52) really consists of two parts, a basal transparent part, the postlabrum or clypeus, and a yellowish transparent part, the true labrum. It is slightly emarginate at apex, provided with a few apical bristles. Beneath (fig. 53) the epipharynx is finely papillose in a semicircular area at the base of the labrum, and converging on this area is a semicircle of marginal blunt spines which form a bristling network.

The mandibles (figs. 56, 57) differ only in specific characters from *Discotenes*.

The maxillae (fig. 54) are complete, being composed of cardo, stipes with a basal piece and the main part to which is attached the 4-jointed palpus, the elongate fingerlike galea and the tactile lacinia. On the main part of stipes is a lobe with a row of strong bristles just below the attachment of the palpus. The basal joint of the palpus is small, the second large and inflated; the third smaller but larger than the first; and the fourth elongate, tapering, but truncate at apex; the palpus has very few hairs or spines. Galea is clad with fine hairs or bristles, is diagonally truncate at apex which is provided with a brush of bristles. Lacinia is provided on the outer side with a strong double row of blunt spines.

The labium (fig. 55) of the adult is transverse, subtrapezoidal, brownish in color with two long spines at the basal angles. The ligula is separated only by a difference of color, being yellow.

³ It has since been collected at Chesapeake Beach, Md., and on the Potomac River, 13 miles above the Capital, by H. S. Barber.

It is strongly bilobed with two long bristles at the middle of the emargination. The palpi are attached on the diagonal sides of the labium, and three jointed, the first and third subequal, the second shortest; joints dark brown, but yellow at apex, second joint with several very long bristles on inner side; third joint with a few shorter bristles. The hypopharynx or inner surface of labrum and ligula has two series of blunt crowded bristles separated from each other by the raised median line.

Thus the interior of the mouth is a network of bristles from all directions.

This genus differs from *Discotenes* by having the lobes of the ligula much stronger.

Figures 59 and 60 illustrate the wing structure.

PLATYSTOMINAE, new subfamily

TABLE OF NORTH AMERICAN TRIBES OF PLATYSTOMINAE

- Beak with sides parallel or almost so. Body oblong or oval; rostral scrobes foveiform.....Platystomini, new tribe.
 Beak very short, narrower in front, trapezoidal; scrobes sulciform.
 Brachyarsini, new tribe.

PLATYSTOMINI, NEW TRIBE

Platyrrhini BEDEL 1885.

TABLE OF NORTH AMERICAN GENERA OF PLATYSTOMINI

1. Tarsi with third joint wider, deeply bilobed, visible from above.....2.
 Tarsi with third joint bilobed, not visible from above.....7.
 2. Hind angles of prothorax not directed outward.....3.
 Hind angles of prothorax directed outward; front coxae contiguous.....6.
 3. Front coxae contiguous or nearly so.....4.
 Front coxae well separated by the prosternum.....5.
 4. Claws almost cleft, body elongate-cylindrical, eyes emarginate.
 Phoenicobiella Cockerell.
 Claws feebly appendiculate, body stout subcylindrical, eyes oval.
 Piesocorynus Dejean.
 5. Eyes rounded.....Pseudanthribus, new genus.
 Eyes broadly emarginate.....Toxonotus Lacordaire.
 Eyes with a short, shallow emargination...Platystomos (Helling) Schneider.
 6. Eyes emarginate.....Eusphyrus LeConte.
 7. Mandibles with a tooth on the ventral edge.....Euparius Schönherr.

Genus PHOENICOBIELLA Cockerell

Phoenicobius LECONTE, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 401. *Type, chamaeropsis* LeConte (not Mörch 1852).

Phoenicobiella COCKERELL, Ent. News, 1906, vol. 17, p. 243.

TABLE OF SPECIES OF PHOENICOBIELLA

- Species dark brown, tessellated with black and yellowish...*chamaeropsis* LeConte.
 Species very light yellowish brown, with slightly darker tessellations.
schwarzi Schaeffer.

PHOENICOBIELLA CHAMAEROPIS LeConte

Phoenicobius chamaeropsis LeConte, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 401.

Common on fresh cut leaves of palmetto, *Sabal palmetto* (*Chamaerops*) in Florida (LeConte, 1876; Schwarz, 1878). It lives in the leaf stems (Schwarz). It is also at hand from Savannah, Georgia (G. Noble) and New Orleans, Louisiana, May 7, June 2 (H. Soltau).

PHOENICOBIELLA SCHWARZI Schaeffer

Phoenicobiella schwarzi Schaeffer, Trans. Amer. Ent. Soc., 1906, vol. 32, p. 273.

Collected inside of dead leaf stem of *Sabal mexicana*, August 14, by C. H. T. Townsend at Brownsville, Tex.⁴ It was also taken June 7, 1895, by E. A. Schwarz at Brownsville, Tex.

Genus PIESOCORYNUS Dejean

Piesocorynus DEJEAN, Cat. Coleop., 1837, ed. 3, p. 257. *Type, dispar* (Gyllenhal), monotype.

Piesocorynus SCHÖNHERR, Gen. et Sp. Curc., 1839, vol. 5, pt. 1, p. 250. *Type, dispar* (Dejean) Gyllenhal by original designation.

TABLE OF NORTH AMERICAN SPECIES OF PIESOCORYNUS⁵

- | | |
|--|-----------------------|
| 1. Prothorax with two shallow depressions and three elevations occupying the middle third; antennae not very slender; eighth antennal joint longer than the ninth in the male and equal in the female; elytra with discal areas lighter brown..... | plagifer Jordan. |
| Prothorax without impressions or elevations; antennae very slender; eighth antennal joint equal to the ninth in the male and shorter than the ninth in the female..... | 2. |
| 2. Pubescence mottled yellow brown and black..... | mixtus LeConte. |
| Pubescence nearly black, elytra more tuberculate..... | moestus LeConte. |
| Blackish brown, alternate elytral intervals tessellated with black and yellowish spots (female unknown)..... | tesselatus Schaeffer. |

⁴ Schaeffer, Trans. Amer. Ent. Soc., 1906, vol. 32, p. 274.

⁵ After the above treatment of *Piesocorynus* was written by Pierce, an additional species of the genus *P. virginicus* was described by Leng (Journ. N. Y. Ent. Soc., vol. 26, 1918, p. 11). The introduction of this species into Pierce's key brings about troublesome complications that are easiest avoided by adopting a somewhat different classification; accordingly, a new synoptic key has been prepared. The writer has been very materially aided by the generosity of Mr. Charles Schaeffer, who loaned the holotype of *Piesocorynus tesselatus* Schaeffer, and of Mr. W. T. Davis, who presented a paratype of *P. virginicus* Leng to the National Museum.

In the key which follows mention is made of the "postscutellar carina." (See p. 1.) This structure is visible only when the prothorax is bent downward or otherwise slightly separated from the mesothorax; it originates just below the lateral extremity of the dorsal transverse carina and extends inwardly along the deflexed, subvertical face of the pronotal base, between the transverse carina and the extreme basal margin of pronotum.

The elytra of all the species are minutely granulate; this feature, though largely obscured by the vestiture, can generally be observed on the basal median callus, or on and

PIESOCORYNUS PLAGIFER Jordan

Piezocorynus plagifer JORDAN, Novitates Zoologicae, 1904, vol. 11, p. 277; name proposed for *P. dispar* LeConte, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 402 (not Gyllenhal 1833).

Feeds as adult on fungus growing on trunks of dead beech (*Fagus americana*); taken in abundance by C. Dury near Cincinnati, Ohio (Beutenmüller, 1893). On old logs and under loose bark in the District of Columbia (Ulke, 1902, p. 55). Occurs in Ohio, Kentucky, Mississippi, and Georgia.

PIESOCORYNUS MIXTUS LeConte

Piezocorynus mixtus LECONTE, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 402.

Taken under the same circumstances as *plagifer* (Beutenmüller, Ulke). Occurs in New York, Maryland, Ohio, Virginia, Florida, Covington, La., and Columbus, Tex.

PIESOCORYNUS MOESTUS LeConte, J. E.

Anthrribus moestus LECONTE, Ann. Lyc. Nat. Hist. New York, 1824, vol. 1, p. 172, pl. 2, fig. 13 (*capitlicornis* Say, Journ. Acad. Nat. Sci. Phila., vol. 5, No. 2, p. 249).

Rare on dead branches in Florida (Schwarz, 1878). On old logs and under loose bark in District of Columbia (Ulke, 1902, p. 55). Also taken at Covington, La., May 28–June 14 (H. Soltau).

PIESOCORYNUS TESSELATUS Schaeffer

Piezocorynus tessellatus SCHAEFFER, Trans. Amer. Ent. Soc., 1906, vol. 32, p. 274.

Described from the Huachuca Mountains, Ariz.

PSEUDANTHRIBUS, new genus

Anthrribus LECONTE, Proc. Amer. Philos. Soc., 1876, vol. 15, pp. 402, 403 (not Geoffroy 1762).

just behind the humeral callus. The granules are somewhat coarser in *virginicus* than in any of the other species. Although special and easily perceived sexual differences are present in four of the five species, there seems to be no well-marked sex character affecting them all; the basal segments of the abdomen are generally slightly flattened in males, evenly convex in females, but this distinction is often impossible to appreciate. The tarsal claws of all the species have a broad basal tooth.

Localities cited are for specimens in the United States National Museum collection.

Supplementary key to the North American species of *Piezocorynus*:

1. Elytra with an extensive, ochreous, discal area (that contrasts strongly with the black sides) extending longitudinally from just behind the scutellar callus to declivity, wider in basal half where it covers the first five intervals, than towards declivity where it entirely covers only the first and second intervals, and occasionally the third and fourth, in part; sides of elytra black, except ninth interval which is tessellated; pronotum with three distinct, slightly postmedian elevations arranged in a transverse row, the central one more prominent; postscutellar carina lacking; pronotal punctures shallow and extremely dense, small at apex but becoming much

TABLE OF NORTH AMERICAN SPECIES OF PSEUDANTHRIBUS

The following table is from Schaeffer (1904) :

- | | |
|--|-------------------------|
| 1. Pubescence of thorax and elytra uniform, dense, yellowish gray, without erect tufts of scales..... | lividus LeConte. |
| Pubescence grayish white, yellow and brown forming denser brush-like tufts on thorax and elytra..... | 2. |
| 2. Elytra with basal fascia or spot..... | 3. |
| Elytra without basal fascia or spot..... | 5. |
| 3. Elytra with a well-defined large transverse white spot in front of middle not extending to the side margin..... | cornutus Say. |
| Elytra with more or less distinct fascia of dense white or ochreous hairs extending to the side margin..... | 4. |
| 4. Thorax without larger black spot near each hind angle, the middle and posterior tufts of hairs on the elytra more widely separated from each other than the first and second, the line of denser white and yellowish hairs convergent in front..... | vagus Horn. |
| Thorax with one black spot each side near hind angles, the distance between the first and second elytral tuft equal to that between the second and third, the lines of whitish and ochreous hairs at apex of thorax divergent in front..... | bipunctatus Schaeffer. |
| 5. Elytral tufts equidistant, middle thoracic tuft large and black, the arcuate lines convergent in front but very indistinctly defined at apex. | |
| | penicellatus Schaeffer. |

coarser near base where the thin interstices show a marked tendency to assume a transverse arrangement; antennae heavy, equal to or one-half longer than body in male, of normal length in female.

Male.—Eighth segment of antenna much longer than ninth, generally equal to, or longer than, entire club, the latter with its segments obliquely emarginate and somewhat asymmetric; mid-tibia a little more abruptly expanded internally at apex than in female, but without apical spine. In a few specimens a feeble longitudinal carina is present on middle of first abdominal segment.

Female.—Antennae somewhat more than half as long as body, the eighth segment subequal to or slightly shorter than ninth; club relatively broader, its segments obliquely emarginate.

Length, 4.5 to 7 mm. Georgia, Mississippi, Kentucky, Illinois, Ohio, and Marylandplagifer Jordan.

(dispar LeConte, not Gyllenhal).

- | | |
|--|----|
| 1a. Elytra without a discal area as above; postscutellar carina present; pronotum without marked elevations (in <i>mixtus</i> and <i>moestus</i> a less prominent median one is sometimes developed); pronotal punctures very dense, nearly uniform in size and distribution, the thin interstices forming a regular network and not transversely arranged near base; antennae much thinner, shorter than body in both sexes, eighth segment of normal length..... | 2. |
| 2. Elytra with an extensive black discal area extending from base to declivity, covering about five intervals on each elytron, broader at base, rarely with some paler mottlings; sides of elytra pale and more or less tessellated; pronotum without elevations; postscutellar carina (in the four specimens seen) feeble, developed for a short distance at sides only. | |

Male.—Middle tibia with its inner apical angle produced into a broad, flat spine; antennae about three-fourths as long as body, the eighth segment equal to ninth or nearly so, the club broad, flattened, and with its segments obliquely emarginate.

Female.—Antennae a little shorter, eighth segment shorter than ninth, tenth segment relatively longer than in male; club narrower and less flattened, and with its segments evenly emarginate.

Four specimens seen: One male paratype from Wingina, Va.; one female, Baton Rouge, La. (O. W. Rosewall); one female, Cupids Bower Island, Md. (R. C. Shannon); one female, Tampa, Fla. (Hubbard and Schwarz).....virginicus Leng.

PSEUDANTHRIBUS BIPUNCTATUS Schaeffer

Anthrribus bipunctatus SCHAEFFER, Journ. N. Y. Ent. Soc., 1904, vol. 12, p. 235

Described from Brownsville Tex., where it was found in April and May.

PSEUDANTHRIBUS CORNUTUS Say

Anthrribus cornutus SAY, Desc. new species Curculionites, 1831, p. 4.

Adults found on honey locust (*Gleditsia triacanthos*) by C. Dury and bred from stems of tamarix (*Tamarix gallica*) by Popenoe (Beutenmüller, 1893). Not rare on dead branches in the District of Columbia (Ulke, 1902, p. 55). Bred from stems of cotton (*Gossypium hirsutum*) July 13, 1895, at San Diego, Tex. Taken on *Quercus* sp. at Longview, Tex., March 26, 1908, by E. S. Tucker; on *Acacia* sp. at Sabinal, Tex., June 3, 1910 by F. C. Pratt. Has been taken at lights at Gregory and Brownsville, Tex. Occurs in the District of Columbia, Georgia, Florida, Alabama, Tennessee, Louisiana, Illinois, and Texas.

(The Tampa, Fla., female has disk of elytra tessellated much as in one of the unusually dark specimens of *mixtus*, and is similar in most structural characters also. It has, however, coarser elytral granulations, an even pronotum, and a feeble postscutellar carina, and is therefore placed with *virginicus*).

- 2a. Elytra subevenly tessellated over entire surface, or at least never with an extensive discal area that contrasts in color with sides (*mixtus* sometimes has a dark rectangular scutellar spot); postscutellar carina apparently well developed, extending from side to side, or only narrowly interrupted at middle, in the specimens examined; mid tibia of male without a spine at apex; antennae noticeably thin, the club only moderately flattened and with its segments symmetrically, not obliquely, emarginate-----3.
3. First segment of fore tarsus, as seen from above, pale on basal one-third only, apical two-thirds black; ground color of body above blackish-brown, the elytral tessellations unusually even and distinct; pronotum without prominences; postscutellar carina strong.

Male.—Second segment of abdomen without acute tubercle, third segment shallowly concave at middle; eighth antennal segment heavy, conically widened towards apex where its width is a little more than half its length.

Length of male holotype, 6.5 mm. (female unknown). Huachuca Mountains, Ariz.-----tesselatus Schaeffer.

- 3a. First segment of fore tarsus pale in basal half or basal three-fourths, black apically; second abdominal segment of male with an acute tubercle on median line near second suture; eighth antennal segment slender (male and female), its width at apex distinctly less than half its length; size smaller; eastern United States-----4.
4. Ground color of elytra normally ochreous, rarely darker ferruginous, the pronotum with blackish and reddish mottlings, the generally conspicuous elytral tessellations composed of black and whitish spots; a transverse rectangular dark scutellar spot often present; of the dark tessellations, those across middle of elytra on third and fifth intervals are larger, and are generally nearly opposite each other, giving the appearance of a broken, transverse bar; pronotum generally with a quite distinct median prominence, rarely with feeble lateral ones also.

Length, 3 to 5.5 mm. New York, Maryland, Ohio, Virginia, North Carolina, Georgia, and Texas.-----*mixtus* LeConte.

- 4a. Ground color above very dark, almost black, with a smoky-gray to slate-gray tinge; pronotal surface uniform black (excluding the usual, short, apical, white line and occasional small spots of whitish pubescence); elytral tessellations obscure, generally formed by black spots which, in some specimens, alternate with gray spots; pronotum with median elevation less frequently developed and less prominent, than in *mixtus*.

Length, 2.75 to 5.25 mm. Louisiana, Florida, and Maryland.-----*moestus* LeConte.

—L. L. BUCHANAN.

PSEUDANTHRIBUS LIVIDUS LeConte

Anthribus lividus LECONTE, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 403.

Taken at Sebastian, Fla., April 7, and at Savannah, Ga. (Hubbard and Schwarz).

PSEUDANTHRIBUS PENICELLATUS Schaeffer

Anthribus penicellatus SCHAEFFER, Journ. N. Y. Ent. Soc., 1904, vol. 12, p. 236.

Described from Brownsville, Tex.

PSEUDANTHRIBUS VAGUS Horn

Anthribus vagus HORN, Proc. Cal. Acad. Sci., 1894, vol. 4, p. 448.

Described from Southern California.

Genus PLATYSTOMOS (Hellwig) Schneider

Platystomos (Hellwig) SCHNEIDER, Neuestes Mag., 1791, vol. 1, pt. 1, p. 21, footnote. Type, *albinus* Linnaeus, hereby designated.

Platystomos HELLWIG, Schneider's Neuestes Mag., 1792, vol. 1, pt. 4, p. 393. *Macrocephalus* OLIVIER, Encycl., 1789, vol. 4, p. 36 (not Swederus 1787). Type of genus, *albinus* Linnaeus, designated by Bedel, 1881.

PLATYSTOMOS ALBINUS Linnaeus

Curculio albinus LINNAEUS, Syst. Nat., 1758, ed. 10, p. 385.

Taken in old wood (Rivers, 1886). In Europe this species breeds in dead wood and dry hedgerows of oak (*Quercus*), birch (*Betula*), elm (*Ulmus*), and willow (*Salix*) (Bedel, 1885). Breeds in dead wood of *Fagus*, *Betula*, *Salix*, *Ulmus*, *Quercus*, and *Carpinus* (Schau-fuss, 1914, 1028). Breeds in decaying wood of *Fagus sylvatica*, *Ulmus*, *Crataegus oxyacantha*, *Carpinus betulus* Linnaeus, *Quercus*, *Salix*, and *Betula alba* (Kleine, 1910 47).

Genus TOXONOTUS Lacordaire

Toxonotus LACORDAIRE, Gen. Coleop., 1866, vol. 7, pp. 575, 576. Type, *fascicularis* Schönherr, monotype.

TOXONOTUS FASCICULARIS Schönherr

Anthribus fascicularis SCHÖNHERR, Gen. et Spec. Curc., 1833, vol. 1, p. 132.

This species is found in Cuba, and at Key West, Biscayne, and St. Lucie, Fla.

Genus EUSPHYRUS LeConte

Eusphyrus LECONTE, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 399. Type, *walshii* LeConte, monotype.

EUSPHYRUS SCHWARZI, new species

Three specimens taken at Key West, Fla., March 8, 13, and 22, 1912, by E. A. Schwarz, differ from the other described species in having the pronotum broadly rounded at sides, due to strong development of the lateral carina from basal angles to before middle and in the more conspicuous tessellate areas of white pubescence. Shapes of the pronotum, antenna, rostral apex, eye, and scrobe are shown in Figure 63 in comparison with *rectus* (fig. 64) and *walshii* (fig. 65).

Type and two paratypes.—Cat. No. 41368, U.S.N.M.

EUSPHYRUS ARIZONENSIS Schaeffer

Eusphyrus arizonensis SCHAEFFER, Trans. Amer. Ent. Soc., 1906, vol. 33, p. 272

This species was described from the Huachuca Mountains, Ariz. It is not represented in the national collection.

EUSPHYRUS RECTUS Schaeffer

Eusphyrus rectus SCHAEFFER, Trans. Amer. Ent. Soc., 1906, vol. 33, p. 271.

Twenty-five Texan specimens are tentatively referred to this species with much doubt because of the conspicuous differences in vestiture. Figure 64 is drawn from one of the four specimens collected at the type locality, Brownsville. Other localities represented are Columbus, San Diego, Victoria, San Antonio, Beeville, and Devils River, the two latter localities probably representing distinct species.

EUSPHYRUS WALSHII LeConte

Eusphyrus walshii LECONTE, Proc. Amer. Philos. Soc., 1876, vol. 15, p. 400.

Bred from twigs of black locust (*Robinia pseudacacia*) (Schwarz, Proc. Ent. Soc. Wash., 1890–91, p. 74). Breeds in dead wood of deciduous trees (Smith, 1900). Bred from twigs of dead fig (*Ficus* sp.) (Townsend, 1903, p. 99). (See fig. 65.)

Genus EUPARIUS Schönherr

Euparius SCHÖNHERR, Isis von Oken, 1823, Heft 10, p. 1135. *Type* (*lunatus* Fabricius) *marmoreus* Olivier, hereby designated.

Euparius SCHÖNHERR, Curc. Disp. Meth., 1826, p. 36. *Type*, *tigris* Schönherr, by original designation. Not preoccupied by *Euparia* Lepeletier-Serville, 1825.

Cratoparis DEJEAN, Cat. Col., 1837, ed. 3, p. 257. New name for *Euparius*.

The weevils of this genus so far as known breed in fungi.

EUPARIUS LUGUBRIS Olivier

Macrocephalus lugubris OLIVIER, Entomologie, 1795, vol. 4, no. 80, p. 13.

In fungi growing on old logs in District of Columbia (Ulke, 1902, p. 55). Occurs in the Atlantic States, abundant southwardly and as far west as northeast Texas.

EUPARIUS MARMOREUS Olivier

Macrocephalus marmoreus OLIVIER, Entomologie, 1795, vol. 4, no. 80, p. 12.

Breeds in white fungus on dead trees. Specimens of fungus were collected at Tallulah, La., July 15, 1909, from which adults emerged November 20, 1909. The species has been found on dead oak (Beutenmüller, 1890); feeding on white fungus covering base of a live water oak (*Quercus phellos*) at Logansport, La. (Pierce, 1907, Neb. Hort. Soc., p. 295); in tree fungus at Victoria, Tex., November 15 (J. D. Mitchell); at light, Dallas, Tex., May 27, 1905 (C. R. Jones). Abundant in the Atlantic States. (See figs. 66, 67.)

BRACHYTARSINI, NEW TRIBE

The oldest generic name in the group is *Amblycerus* Thunberg⁶ (1815), which is excluded by Bridwell in footnote 7.

TABLE OF GENERA BRACHYTARSINI

- | | |
|---|--|
| 1. Thoracic carina not extending forward on sides..... | <i>Anthribulus</i> LeConte. |
| Thoracic carina extending forward on sides..... | 2. |
| 2. Posterior angles of thorax salient and acuminate; eyes usually very prominent..... | 3 |
| Posterior angles of thorax rectangular; eyes moderately or hardly prominent..... | 4. |
| 3. Lateral carina complete, very salient..... | <i>Pseudobrachytarsus</i> , new genus. |
| Lateral carina prominent in posterior half only.... | <i>Brachytarsus</i> Schönherr. |
| 4. Lateral carina complete..... | <i>Araeoderes</i> Schaeffer. |
| Lateral carina extending only part way..... | <i>Brachytarsoides</i> , new genus. |

This tabulation sets off the two predaceous genera *Pseudobrachytarsus* and *Brachytarsus* from the vegetarian genera.

The type species of *Pseudobrachytarsus*, *A. fasciatus* Forester (*scabrosus* Paykull), is European and lives as a larva on Coccidae and transforms under the dried shell of *Lecanium genevense* Tar-

⁶ Nov. Act. Reg. Soc. Scient. Upsaliensis, vol. 7, pp. 106, 109, 121.

⁷ It is impossible to accept the designation by Crotch (1870) of *Amblycerus nebulosus* Thunberg 1815 as genotype of *Amblycerus* because of insufficient bibliographical indication to determine the identity of that species which is not described in the original reference and might refer to *Anthribus nebulosus* Forster (1771), *Bruchus nebulosus* Olivier (1795), or *Macrocephalus nebulosus* Olivier (1795). I hereby designate as genotype of *Amblycerus* Thunberg (1815) (not Raffray 1895) *Bruchus robiniae* Fabricius (1781) = *Spermophagus robiniae* Gyllenhal (1833) (excluding description). This species is not apparently congeneric with *Spermophagus titivilitius* Boheman (1833), genotype of *Spermophagus* Schönherr (1833).—J. C. Bridwell.

gioni Tozzetti on *Crataegus oxyacantha*, *Pulvinaria carpini* Linnaeus on *Carpinus*, *Lecanium corni* Bouché and *L. persicae* Fabricius, *Gossyparia spuria* Modeer and other Coccidae. The adults feed on the buds of young plants and have been taken on *Aesculus hippocastanum*, *Prunus cerasus*, *Carpinus betulus*, *Crataegus oxyacantha*, *Malus malus*, *Juglans regia*, *Picea excelsa*, and *Pinus silvestris*.

The type of *Brachytarsus* is *variegatus* Fourcroy (*varius* Fabricius). The larva lives on the scales of *Physokermes piceae* Schrank on *Abies* and *Pinus* and other conifers.

The writer has not yet perfected a suitable table of species of *Brachytarsoides*, of which *griseus* LeConte is hereby designated type.

The following notes on the habits of our American species will be of interest.

Brachytarsoides alternatus Say breeds in many plants. It is recorded from *Zea mays*, *Vigna unguiculata*, *Pisum sativum arvense*, *Ipomoea pandurata* (in the fungus *Aystopus ipomoea-panduranae*), *Elymus virginicus*, *Sideranthus phyllocephalus*. R. A. Cushman bred it from dry galls of *Ipomoea lacunosa*, at Dallas, Tex., April 9, 1907. H. S. Smith bred it from heads of *Grindelia squarrosa* collected at Clarendon, Tex., October, 1908. V. I. Safro bred it from heads of *Grindelia squarrosa nuda* at Childress, Tex., July 29, 1908. S. Goes found it on flowers of *Sideranthus phyllocephalus* at Ennis, Tex., October 7, 1905, and on *Ambrosia* at Mexia, Tex., June 12, 1905. A. C. Morgan and W. E. Hinds found it hibernating in cotton bolls at Corpus Christi, Tex., March 23, 1905. A. L. Quaintance recorded (1907) that the eggs were deposited with excrement and partly digested food and placed loosely on bases of kernels of shelled corn. The life cycle was six or seven weeks. The writer found the species laid its eggs in the tips of new lateral stems of *Sideranthus*. The larvae feed in these stems surrounded by pulverized remains. They pupate in the tips of the stems, or even in the main stem, becoming so numerous that they absolutely riddle the stem in which they are breeding. They may be described as pseudopods. It is parasitized by braconids and *Microdontomerus anthonomi* Crawford.

Brachytarsoides griseus LeConte was taken on *Aphanostephus skirrobasis* flower heads at Cuero, Tex., April 6, 1906, and at Calvert, Tex., May 18, 1907, by R. A. Cushman.

Brachytarsoides limbatus Say was first bred from the flower heads of *Helenium tenuifolium* by E. A. Schwarz. It also breeds in *Helenium microcephalum*, and has been collected on *Rudbeckia amplexicaulis* and *Xanthium*. The larvae feed among the seeds of *Helenium* and pupate in the cell they have made. In *H. microcephalum* the pupal cell is sometimes in the columnar portion of the head.

Brachytarsoides paululus Casey is recorded by Blatchley and Leng from the seed pod of *Staphylea trifolia*.

Brachytarsoides plumbeus LeConte was found abundant on *Coreopsis cardaminefolia* at San Antonio, Tex., May 4, 1905, and on *Argemone platyceras rosea* at Cotulla, Tex., May 5, 1905, by J. C. Crawford and the writer.

Brachytarsoides riddelliae Schaeffer was originally described from (*Riddellia*) *Psilostrophe* sp. at Tucson, Ariz. It was taken on *Ratibida columnaris* at Del Rio, Tex., May 1, 1907, by F. C. Bishopp.

Brachytarsoides sticticus Boheman (*variegatus* Say) has been recorded as depredating wheat bins in New York. E. A. Schwarz bred it from smut of corn. Chittenden says the larvae are fungus feeders and breed in smut of wheat and corn. Blatchley and Leng record it on flowers of *Cephalanthus occidentalis* in Indiana.

Brachytarsoides tomentosus Say occurs on *Ambrosia artemisiaefolia*.

Brachytarsoides vestitus LeConte breeds in flower heads of *Helenium tenuifolium*.

Anthrribulus rotundatus LeConte is recorded on the flowers of *Vaccinium* by Blatchley and Leng.

I find no record of the host of *Araeoderes texanum* Schaeffer.

Family CHORAGIDAE Des Gozis (1882)

Most of the insects of this family have the ability to jump.

TABLE OF SUBFAMILIES OF CHORAGIDAE

Elytra striate; labial palpi four jointed-----Choraginae, new subfamily.
Elytra not striate-----Zenorchestinae, new subfamily.

CHORAGINAE, new subfamily

This subfamily contains three tribes:

Notioxenini with prothoracic carina antebasal.

Choragini with prothoracic carina basal or subbasal.

Homoeoderini with prothoracic carina absent.

Only the Choragini are represented in our fauna.

TABLE OF NORTH AMERICAN GENERA OF CHORAGINI

Antennae with second joint shorter than the first-----*Araecerus* Schönherr.
Antennae with second joint as long as the first-----*Choragus* Kirby.
Holostilpna Jordan.

The type of *Araecerus* is *fasciculatus* DeGeer (*coffear* Fabricius). This species known variously as the coffee bean weevil, the areca-nut weevil, and the ubiquitous bean weevil is tropicopolitan or subtropicopolitan, breeding in many kinds of vegetable matter. It breeds in

green and dry cornstalks, china berries, dry cotton bolls, castor beans, dry figs, stored betel nuts, coffee berries, ginger, chinese figs, decayed leaves, St. Ignatius bean (*Strychnos ignatii*), chocolate beans, mace, nutmeg, Cassia pods, dry oranges, dried apples, dry peaches, koa seed (*Acacia* pod), mamani seed (*Sophora chrysophylla*), kola nuts (*Sterculia acuminata*), dead wood, St. John's bread seed (*Ceratonia siliqua*).

The larvae are white or pinkish. They pupate in their feeding cell surrounded by the powdered excrement. The adults have not the jumping power of some of the related genera.

In Figure 68 I have drawn the underside of the head, to show the 4-jointed labial palpi and 3-jointed maxillary palpi; and in Figure 69 the undersides of the thorax.

Holostilpna nitens LeConte, the type of the genus, has leaping power. It is found on dead wood of white oak in Maryland and the District of Columbia.

The type of *Choragus* is the European *sheppardi*. Kirby. It burrows in the dead branches of *Crataegus*, *Castanea*, *Fagus*, *Pyrus*, *Quercus*, *Tilia*, and *Salix*. The legs of the larvae are replaced by pseudopods.

The European *C. piceus* Schaum breeds in dead branches of *Ulmus campestris* and *Prunus spinosa*.

Choragus sayi breeds in the United States in dead branches of *Fagus*.

Choragus zimmermanni LeConte occurs on *Liquidambar styraciflua*.

XENORCHESTINAE, new subfamily

TABLE OF NORTH AMERICAN GENERA OF XENORCHESTINAE

Upper surface smooth.....*Xenorchestes* Wollaston.
Prothorax punctured; elytra with irregular double rows of punctures.
Euxenus LeConte.

The weevils of this subfamily have jumping power.

The type of *Xenorchestes* is *saltitans* Wollaston.

Xenorchestes americanus Motschulsky occurs along the Gulf Coast in Texas, Alabama, and Florida. It is found on bushes.

Euxenus punctatus LeConte, the type of its genus, is found on dry palmetto leaves (*Sabal palmetto*) in Florida.

Euxenus piceus LeConte is also found on *Sabal palmetto* in Florida.

EXPLANATION OF PLATES

("W D P," drawn by W. Dwight Pierce; "H B," drawn by Harry Bradford)

PLATE 1

- FIGURE 1. *Discotenes nigrotuberculata* Schaeffer. Face, female. (H B)
 2. *Discotenes nigrotuberculata* Schaeffer. Side view of female head. (H B)
 3. *Discotenes nigrotuberculata* Schaeffer. Mouth parts, female. (H B)
 4. *Discotenes nigrotuberculata* Schaeffer. Sternal sclerites, female. (W D P and H B)
 5. *Discotenes nigrotuberculata* Schaeffer. a. Right mandible, ventral view. (W D P)
 b. Right mandible, dorsal view. (W D P)
 6. *Discotenes nigrotuberculata* Schaeffer. Maxilla, female. (W D P and H B)
 7. *Discotenes nigrotuberculata* Schaeffer. Labium, female, outer view. (W D P)
 8. *Discotenes nigrotuberculata* Schaeffer. Antenna of male and female. (H B)
 9. *Discotenes nigrotuberculata* Schaeffer. Wing, female. (W D P)
 10. *Discotenes nigrotuberculata* Schaeffer. Protarsus. (H B)
 11. *Discotenes nigrotuberculata* Schaeffer. Protarsal claw. (H B)
 12. *Discotenes nigrotuberculata* Schaeffer. Pygidium, female, showing groove. (W D P)
 13. *Discotenes nigrotuberculata* Schaeffer. Genitalia of female. (W D P)

PLATE 2

- FIGURE 14. *Ormiscus angulatus* Pierce. Head and prothorax. (W D P)
 15. *Ormiscus angulatus* Pierce. Prothorax in side view. (W D P)
 16. *Ormiscus angulatus* Pierce. Prosternum. (W D P)
 17. *Ormiscus saltator* LeConte. Face. (W D P)
 18. *Ormiscus saltator* LeConte. Head in side view. (W D P)
 19. *Ormiscus saltator* LeConte. Mouth parts. (W D P)
 20. *Ormiscus saltator* LeConte. Head and prothorax. (W D P)
 21. *Ormiscus solidus* Pierce. Prothorax. (W D P)
 22. *Ormiscus solidus* Pierce. Tarsal claws. (W D P)
 23. *Tropideres bimaculatus* Olivier. Face. (W D P)
 24. *Tropideres bimaculatus* Olivier. Underside of head. (W D P)
 25. *Tropideres bimaculatus* Olivier. Head in side view. (W D P)
 26. *Tropideres bimaculatus* Olivier. Protarsal claw. (W D P)
 27. *Tropideres bimaculatus* Olivier. Metatarsal claw. (W D P)
 28. *Tropideres barberi* Pierce. Protarsus. (W D P)
 29. *Gonotropis gibbosus* LeConte. Face, male. (W D P)
 30. *Gonotropis gibbosus* LeConte. Head in side view. (W D P)
 31. *Gonotropis gibbosus* LeConte. Underside of beak, male. (W D P)
 32. *Gonotropis gibbosus* LeConte. Inner view of maxilla, male. (W D P)
 33. *Gonotropis gibbosus* LeConte. Pronotum, male. (W D P)
 34. *Gonotropis gibbosus* LeConte. Prothorax in side view, male. (W D P)
 35. *Gonotropis gibbosus* LeConte. Sternites. (W D P)
 36. *Gonotropis gibbosus* LeConte. Right protarsal claw, male. (W D P)

PLATE 3

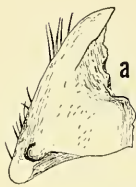
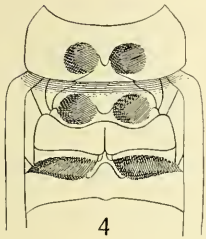
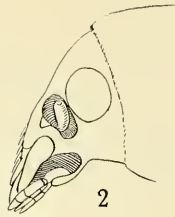
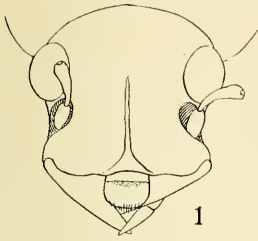
- FIGURE 37. *Eurymycter fasciatus* Olivier. Face, male. (W D P)
 38. *Eurymycter fasciatus* Olivier. Vertex of head. (W D P)
 39. *Eurymycter fasciatus* Olivier. Pronotum, male. (W D P)
 40. *Eurymycter fasciatus* Olivier. Upper portion of thorax and elytra, side view. (W D P)
 41. *Eurymycter tricarinatus* Pierce. Vertex of head, male type. (W D P)
 42. *Eurymycter tricarinatus* Pierce. Underside of beak, male type. (W D P)
 43. *Eurymycter tricarinatus* Pierce. Right metatarsus, male type. (W D P)
 44. *Eurymycter tricarinatus* Pierce. Right metatarsal claw, male type. (W D P)
 45. *Allandrus populi* Pierce. Head and beak. (W D P)
 46. *Allandrus populi* Pierce. Pronotum. (W D P)
 47. *Allandrus populi* Pierce. Metatarsal claw, female. (W D P)
 48. *Allandrus bifasciatus* LeConte. Underside of beak. (W D P)
 49. *Allandrus bifasciatus* LeConte. Metatarsal claws, female. (W D P)
 50. *Meconemus infuscatus* Fahraeus. Side view of beak, female. (H B)
 51. *Meconemus infuscatus* Fahraeus. Underside of head, male. (H B)
 52. *Meconemus infuscatus* Fahraeus. Labrum, outside view. (W D P)
 53. *Meconemus infuscatus* Fahraeus. Labrum, inside view. (W D P)
 54. *Meconemus infuscatus* Fahraeus. Maxilla, outer view, male. (W D P and H B)
 55. *Meconemus infuscatus* Fahraeus. Labium, ventral view, male. (W D P and H B)
 56. *Meconemus infuscatus* Fahraeus. Right mandible, dorsal view. (W D P)
 57. *Meconemus infuscatus* Fahraeus. Left mandible, ventral view (W D P)

PLATE 4

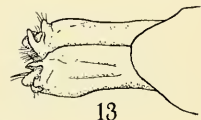
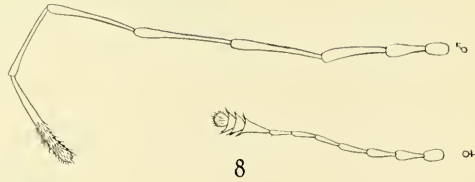
- FIGURE 58. *Meconemus infuscatus* Fahraeus. Sternal sclerites, male. (H B)
 59. *Meconemus infuscatus* Fahraeus. Wing. (W D P)
 60. *Meconemus infuscatus* Fahraeus. Base of wing. (W D P)
 61. *Meconemus infuscatus* Fahraeus. Protarsal claw, male (H B)
 62. *Meconemus infuscatus* Fahraeus. Female genitalia, dorsal view. (W D P and H B)
 63. *Eusphyrus schwarzi* Pierce. *a*, pronotum; *b*, tip of beak; *c*, antenna; *d*, scrobe and eye. (W D P)
 64. *Eusphyrus rectus* Schaeff. *a*, pronotum; *b*, tip of beak; *c*, antenna; *d*, scrobe and eye. (W D P)
 65. *Eusphyrus walshii* LeConte. *a*, pronotum; *b*, tip of beak; *c*, antenna; *d*, scrobe and eye. (W D P)
 67. *Euparius marmoreus* Oliver. Head and prothorax. (H B)
 68. *Araecerus fasciculatus* DeGeer. Underside of head. (W D P)
 69. *Araecerus fasciculatus* DeGeer. Sternal plates. (W D P)

PLATE 5

- FIGURE 66. *Euparius marmoreus* Olivier. (H B)



5



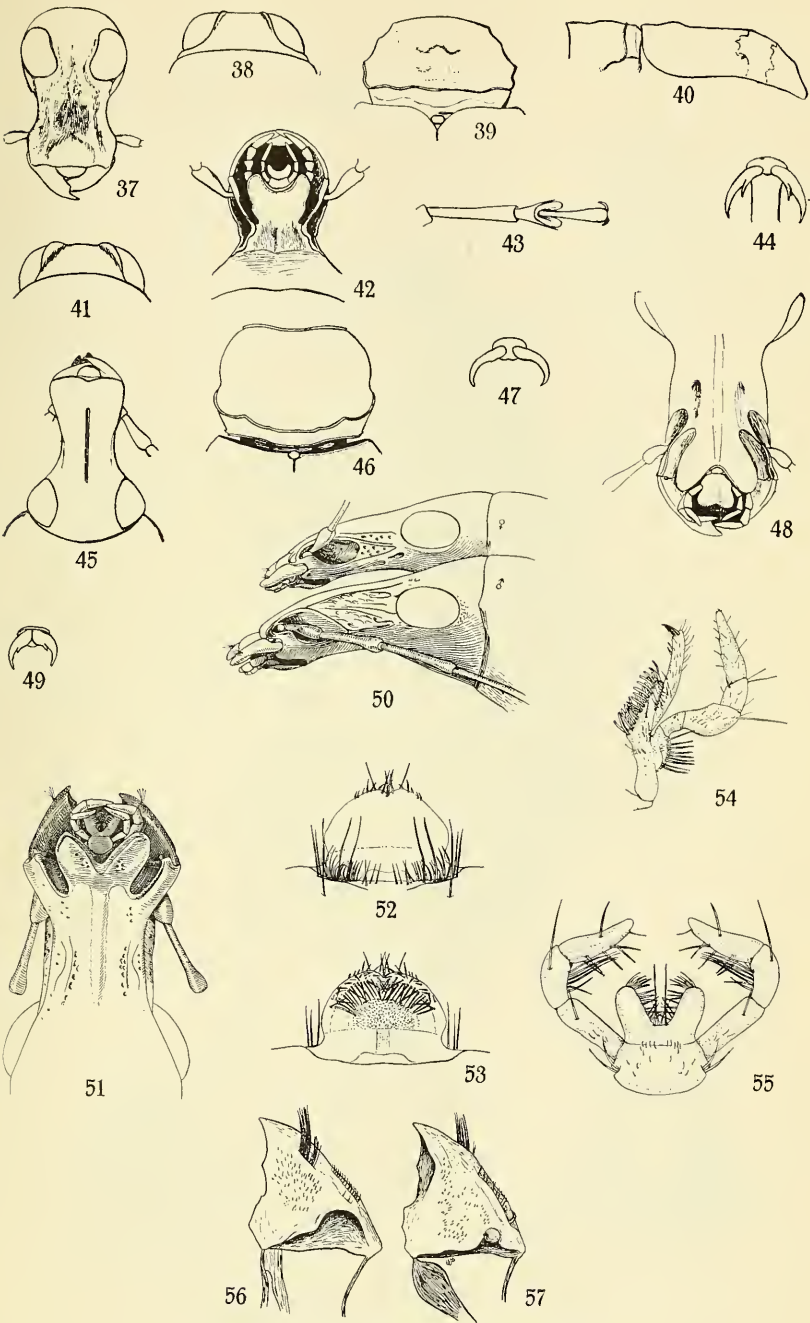
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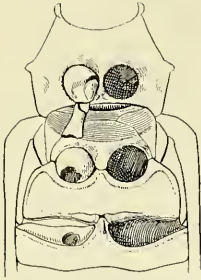
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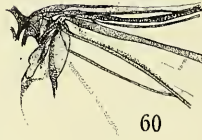
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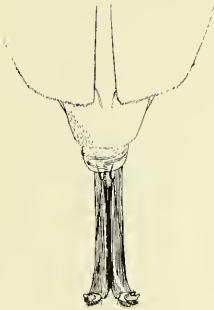
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61



62



63 a



63 b



63 c

63 d



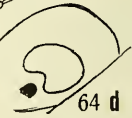
64 a



64 b



64 c



64 d



65 a



65 b



65 c



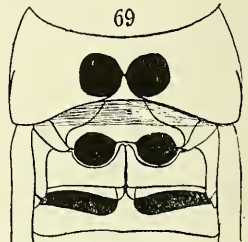
65 d



67



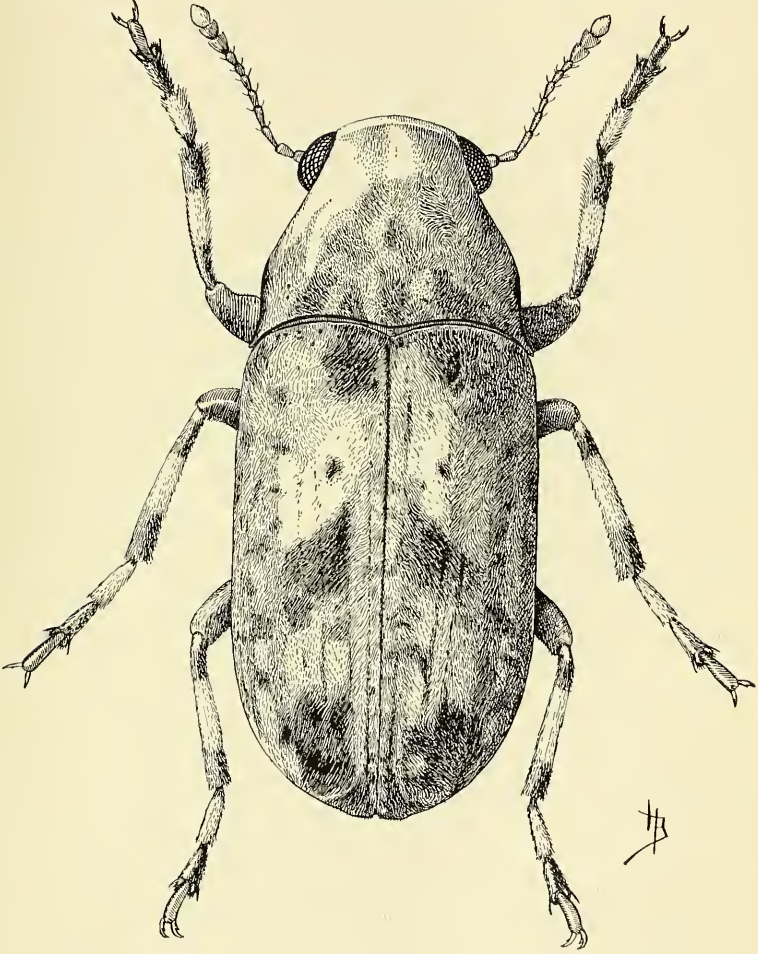
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FOR EXPLANATION OF PLATE SEE PAGE 34.



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FOR EXPLANATION OF PLATE SEE PAGE 34.